

REMARKS

An Office Action was mailed on September 18, 2003. Claims 1 – 7 are currently pending in the application. With this response, Applicants amend claims 1, 2 and 4 – 6, and cancel claim 7 without prejudice or disclaimer. No new matter is introduced.

OBJECTION TO SPECIFICATION

The specification is objected to for containing a title of the invention that is non-descriptive. Applicant amends the title to read “METHOD AND APPARATUS FOR FOCUS CONTROL OF LENS FOR READING MULTILAYER OPTICAL MEDIUM”, and respectfully requests that this objection be withdrawn.

OBJECTION TO CLAIMS

Claims 2, 3 and 7 are objected to as having a format that does not clearly identify the claims as being independent or dependent. Applicant cancels claim 7 without prejudice or disclaimer and amends claim 2 to incorporate the limitations of claim 1. Claim 3 clearly depends from claim 2. Accordingly, Applicant respectfully requests that this objection be withdrawn.

REJECTION UNDER 35 U.S.C. § 102

Claims 1 - 7 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,097,688 to Ichimura et al. Applicant cancels claim 7 without prejudice or disclaimer, amends claims 1, 2, 4 and 5 to correct minor typographical errors, amends claim 6 to be directed to a program product storing an executable program, and respectfully traverses this rejection.

In independent claims 1, 2, 4, 5 and 6, Applicant discloses a focus control apparatus, an optical disk playback system including the focus control apparatus, a focus control method and a program product storing a program executed by an optical disk playback apparatus for

controlling the focus of an objective lens during a jump between recorded layers of the optical disk. Significantly, the playback apparatus may be operated to: a) obtain an intermediate value from a maximum value and a minimum value of a focus error signal which corresponds to defocusing of the objective lens, and which is generated by a certain one of the recorded layers, and b) turn on a focus servo which pulls in a focus of said objective lens, with a bias at which the focus error signal corresponds to the intermediate value, when a layer jump is made to another recorded layer. In this manner, the focus servo operates in a coordinated manner during the layer jump to bring the layer into focus.

Ichimura discloses an apparatus for recording information on an optical medium by laser means. The apparatus of Ichimura determines the presence of spherical aberration by evaluating the relative value of a focus error signal at a time coincident with the arrival of a peak value of an envelope signal (see, e.g., column 9, lines 24 – 53 of Ichimura). Based upon the value of the focus error signal (“-“, “0”, “+”), a gap between a two-group objective lens is adjusted to minimize spherical aberration characteristic of a particular optical medium (see, e.g., column 10, lines 20 – 60).

This procedure disclosed by Ichimura is quite different from the method disclosed by Applicant’s claimed invention. In Applicant’s claimed method, an intermediate value calculated from a maximum value and a minimum value of the focus error signal calculated with respect to one layer of the optical medium is used to indicate a pull-in position for energizing the focusing servo of an objective lens during a jump from a first recording layer to a second recording layer (see, e.g., page 11, lines 10 – 20 of Applicant’s specification). In addition, before jumping, the focus servo is turned on to set a focus bias for the first recording layer at a position corresponding to the intermediate value (see, e.g., page 11, lines 21 – 24). In this manner, the

focusing servo is preset to a nearly optimal position for the point at which it will again be turned on with reference to the second recording layer.

As Ichimura fails to teach a method using a focus error signal for optimally controlling a focusing servo during a jump between recording layers on an optical medium, Applicant respectfully submits that independent claims 1, 2, 4, 5 and 6 fail to be anticipated by Ichimura, and are therefore allowable. As claim 3 depends from allowable claim 2, Applicant further submits that claim 3 is allowable for at least this reason.

CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 1 – 6, consisting of independent claims independent claims 1, 2, 4, 5 and 6 and dependent claim 3, are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,



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